THE MOTIOGRAPH No. 1

MODEL 1908

THE LEADING

MOTION PICTURE MACHINE

"Motiograph" Signifies a Record of Motion.

Six Patents Applied For

It Combines the Highest Efficiency with the Greatest Durability

THE MOTIOGRAPH NO. 1

MODEL 1908

Motion Picture Machine

IS THE LATEST AND THE BEST.

It Projects Steady Pictures, Flickerless Pictures, Brilliant Pictures

It is a wonderful improvement over its predecessors. **IT LOOKS DIFFERENT, IT IS DIFFERENT AND THE PICTURES IT PROJECTS ARE DIFFERENT.**

It is Simple, Rigid, Artistic and Durable, and projects a picture that is **Astonishingly Better** than by other machines.

The Value of a Motion Picture Show is all in the Pictures

It's the quality of the pictures that bring the continued patronage, and the more perfect they are, the more they are appreciated, while poor quality in the pictures will quickly ruin a business.

The greatest success in this business may be attained only by the use of the **best machine that money will buy.**

THAT'S THE MOTIOGRAPH

If you need a machine **you can't afford to consider any other. The Motiograph doesn't cost much more money** than other machines, but it's worth many times the value of any of them, and will be found a big money saver, as well as a big money earner.

The Motiograph has been **designed especially** for the heavy and exacting work of **the Motion Picture Theatre,** and is the only machine that has been designed, and is well adapted for this important class of work.

There's the best of reasons for our claims of superiority, and if you will carefully investigate, we believe **you will think the same as we.**

WE GUARANTEE that the Motiograph will do what we say it will.

Fifty cents a day for a year buys a Motiongraph. If you already **have a machine, discard it, get a good one,** and

SEE YOUR BUSINESS GROW

20 Points of Excellence
. . . IN . . .
THE MOTIOGRAPH NO. 1
MODEL 1908
Motion Picture Machine

That Cannot be Found in Other Machines

1.—Nearly 50 per cent less non-exposure than with other machines, hence sharper and very much more brilliant pictures and **Flicker Eliminated.** A new type of shutter is responsible for these advantages. Patent applied for.

2.—**Steady Pictures,** as a result of perfect design and workmanship.

3.—**A Quick Film Rewind** that is an astonishing improvement. The film may be rewound from the main crank in two minutes, without removal of either the reels or the magazines, and without fatigue. A great boon to the operator. Patent applied for.

4.—**Safety Film Magazines** that are a radical improvement over other styles. The reels or magazines need not be removed when rewinding the film. Patent applied for.

5.—**Magazine Traps With Four Rollers** and with spring actuated flanged guides. Prevents side movement and impossible for fire to pass them. Patent applied for.

6.—**An Automatic Fire Proof Shutter** that never fails. The only one that can be depended upon. Patent applied for.

7.—**A Perfect Framing Device** of new style that does not disturb any other vital parts, and has the framing handle in the most convenient location. Patent applied for.

8.—**Flanged Idler Rollers** to prevent the film being torn or ruined from accidentally running off the sprocket wheels. Patent applied for.

9.—**Enclosed Gears and Working Parts** prevents exposure to dust, dirt and accidents. Saves care and wear and makes better pictures. Located on opposite side from operator, hence not in his way.

10.—**The Intermittent Geneva Parts** are completely enclosed. Saves wear, retains oil, reduces noise, makes better pictures.

11.—**A Perfect Take-up** with new form of belt adjuster. A great improvement over running films loosely into a box, bag or basket.

12.—**Has Indexed Turn-Table Base** which makes it convenient to turn the mechanism for inspection, oiling or adjustment, and instantly clamp it in its proper position.

13.—**Strength, Rigidity and Perfect Fitting Parts** prevents vibration of the picture. It is more rigid than any other mechanism.

14.—**Electric Motor Attachment** may be added at any time. The machine is especially adapted for it.

15.—**"Lid Off Wide Open" Lamp House** is a great convenience for renewal of carbons, etc.

16.—**Improved Arc Lamp** with **All Hand Wheel Adjustments,** for focusing means better pictures, because the operator can focus the light instantly and accurately.

17.—The **Slide Carrier Swing** saves for the motion pictures about one-third of the illumination, an amount that is lost without it.

18.—The Vertical Adjustment of Mechanism and Lamp House is permanently fixed, and they cannot get out of alignment.

19.—**The Gibralter Swiveled Pedestal Stand** holds the machine **rock steady** and provides the most delicate adjustment for the picture on the screen.

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20.—The Motiograph is Artistic in Design, Well Made and Beautifully Finished. It will outwear any other machine, will be a source of pride to both the operator and the Management, and will **Increase the Bank Account.**

DETAILED DESCRIPTION.

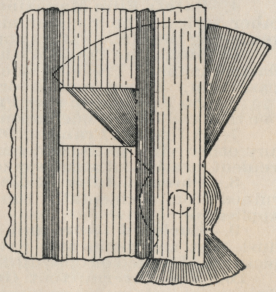
"Motiograph" has been selected as a name, because it signifies "A Motion Record."

The Shutter is probably the most important element in the production of a good motion picture machine. In this particular, we claim that

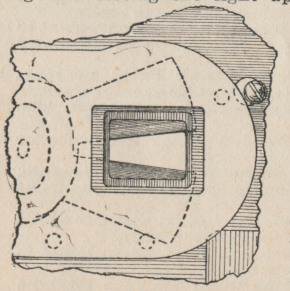
The Motiograph reigns supreme, and to substantiate our claim, we will make the following explanation, which will be readily understood by anyone conversant with the art of producing motion pictures. It is well known that the elimination of flicker in the picture depends upon the degree of non-exposure as compared with the period of exposure. Until the introduction of the Motiograph, the best that has been accomplished by machines generally known to the trade has been a duration of picture equal to about 50 to 55 per cent as compared with a duration of darkness equal to about 45 to 50 per cent. Greater exposure would be at the expense of brilliancy, on account of the movement of the film. In the Motiograph the period of non-exposure has been reduced to approximately 25 per cent, which means a reduction in the period of non-exposure amounting to nearly 50 per cent, and an increase of equal proportion in the period of exposure or duration of picture, which means far more in the results than the figures would seem to indicate. Other manufacturers have done the best they could with their form of construction, while in the Motiograph the results have been accomplished by using a form of construction adapted to the requirements.

The above figures apply to our form of shutter, which produces a single interruption besides the non-exposure for each picture.

The customary form of shutter construction in general use is what is known as the disc type, which is usually mounted on the framing device and travels up and down with it. In opening and closing the light aperture, which is about 11-16ths of an inch high by 15-16ths of an inch wide, the disc shutter crosses the aperture over its greatest length, which is diagonally across from corner to corner, a distance of about 1⅛ inches.



Disc Type of Shutter.



Motiograph Shutter.

The Motiograph shutter is a new and original type, known as the "double truncated cone," by the use of which we are able to open and close the light aperture across its narrowest width, which is 11-16ths of an inch, and are further able to cut that travel in half on both the opening and closing movements, by the use of the double shutter which opens and closes from both sides at the same time, thus making the period of opening and closing cover a shutter travel of 11-32nds of an inch, as against a diagonal shutter travel of about 36-32nds, (1⅛) inches

when using the disc type of shutter. The period of non-exposure when using the disc type of shutter is still further lengthened by the necessity of using a wider wing on account of the shutter being carried up and down by the framing device. The Motiograph shutter does not change position with relation to the light aperture while framing the picture. From the above explanation it should be plainly apparent to anyone who has any knowledge of the principles of motion pictures that our claim of nearly 50 per cent reduction in the period of non-exposure, and a corresponding percentage of gain in duration of picture is correct, and that the flicker is reduced proportionately.

Some manufacturers, in an effort to correct the functional disadvantages of their machines, reduce the shutter wings to a point where the film is in motion during most of the time that the light aperture is being covered and uncovered by the shutter, and while by so doing they increase the exposure, the movement of the film blurs the picture and destroys the sharpness. Other devices are also in use with the same object in view, but with similar results.

A still further improvement is accomplished in the Motiograph shutter by the use of a pair of Interrupting Wings, for the purpose of dividing the period of exposure, as a means of further reducing the flicker, but the interrupting wings are reduced in width in proportion to the reduction in width of the main wings, all of which is made possible by the short travel and their peculiar cone shaped form of construction, which features are covered in one of our many patents.

Shutter Protection is an important feature in the Motiograph. The shutter in any machine must necessarily be light and delicate, but in the Motiograph the shutter is entirely out of harm's way, being entirely enclosed within the main frame. Many exhibitors have suffered great inconvenience and loss of both time and money by the breakage of shutters and will fully appreciate this feature.

Steady Pictures depend upon two conditions, viz: a perfect film and a perfect machine. Without a perfect film no machine will project a steady picture; while, on the other hand, with the most perfect film obtainable, steady pictures cannot be projected without a machine that is properly designed and absolutely accurate in its vital parts. For example, an error of 5-1000ths of an inch in either the film, the sprocket wheel or the Geneva Star, or in the adjustment of the Star to the Geneva Driver (pin wheel). when using a lens of six inch focus, produces an unsteadiness or dancing movement of the picture on the screen to the amount of approximately one inch, when the machine is located at a distance of one hundred feet from the screen, and a combination of two or more of the above errors may multiply the unsteadiness in proportion to the number of errors. A variation of a much smaller amount than the above is not only tiresome, but very annoying to an audience.

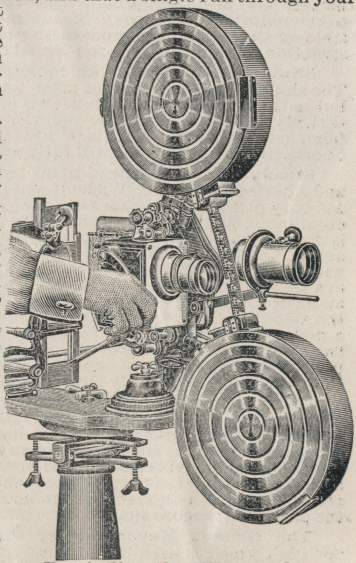
One who is posted and observing may be easily convinced that the Motiograph has been well designed, that it is carefully and accurately made, and that first-class material has been used throughout. In the construction of the Motiograph many thousands of dollars more than is customary have been expended for special tools, dies, jigs, etc., with a view to making the parts of the machine accurate and uniform. The above, together with great care in manufacturing, are the reasons why the pictures are more steady.

The Geneva Movement for the operation of the intermittent sprocket wheel is used in the Motiograph. because it is the only movement that will carry the film with sufficient speed and accuracy to give a sharp, clear and steady picture without injury to the film. It stands to reason that with the many teeth of the sprocket wheel engaging the perforations in the film, together with the manner in which the film encircles the wheel, it would be far less liable to cause damage than in other forms of movement where only one to three teeth engage on each side, and the pull on the film is in a straight line, without support between the teeth. The best that may be said of other movements is that they are cheaper to manufacture. In the selection of a machine it is of the most vital importance, whether you expect to rent or own your

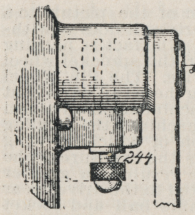
films, that it be of such construction that it will not tear the sprocket holes in the films, because a user who returns films to the rental agent in that condition will either get undesirable service or be discontinued entirely, besides the possibility of having to pay heavy damages on the films that are injured.

The Care of the Films is of the most vital importance, whether you be a renter or the owner, because in either instance you are responsible for their condition. Good pictures cannot be produced without good films. Films may be injured by little cracks at the corners of the sprocket holes; by the film jumping the sprocket, and the sprocket teeth puncturing or perforating the film; by having the sprocket holes torn entirely out at intervals; a series of divisions between the sprocket holes being torn out; the films may be pulled in two at different points and have to be spliced; the surface may be covered with fine or coarse scratches, which may extend the entire length of the film; the emulsion may be scraped off in spots, the result of which will be the flashing of light spots; the film may have holes burned in it, or it may be entirely consumed by a careless or thoughtless movement on the part of the operator. When you consider that the value of the average reel of film of 1000 feet in length is $120. and that your machine is responsible for its length of life or depreciation, and that a single run through your machine may cost you any part of or the entire value of that film, you may begin to realize how important it is that you have in a Motion Picture Machine the best that money can buy

The Motiograph Quick Rewind is an original, new and novel arrangement, for which a patent application has been filed, and nothing that approaches it is to be found on any other machine. It is a very great improvement over any other film-winding mechanism, in that the film is rewound direct from the main crank handle, which is in the most convenient and comfortable location for the operator, besides which the greater sweep of the handle makes it possible to rewind without fatigue, and by the power being communicated to the opposite side of the machine in order to reach the reel arbor, the magazine may be located with door toward the operator, an advantage that is highly prized by every operator of experience. In considering the advantages of this rewind as compared with others, do not overlook the fact that the location of the crank is on a line with the elbow of the operator, which is the easiest position for the arm, besides which the sweep of the crank is double that used on other forms of rewind, a further disadvantage of which is that they are placed on a line with the operator's face. If you hav'nt already had that experience, hold your arm in that position, turn a short crank with a heavy load for three minutes and see how you like it. Then imagine doing it every half hour, besides the regular work of operating the machine. **It's a pleasure** to rewind with the the Motiograph. To shift the connection between the crank and the

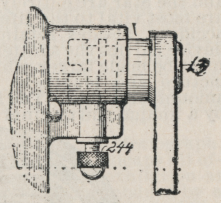


Rewinding the Film on the Motiograph.



Position of Crank when showing Pictures

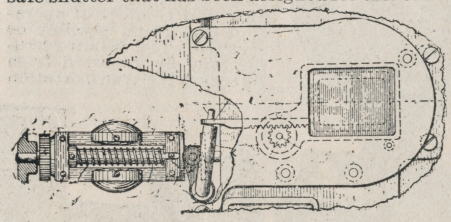
reel arbor, all that is necessary is to loosen a small thumb screw under the crank boss of the main frame, turn the crank slightly, pull it outward about ⅜ths of an inch, and tighten the screw. When using this form of reeling mechanism in combination with fireproof film magazines, it is unnecessary to remove either the magazine or the reel for rewinding; in fact, with reasonable care and by the use of a few feet of white leader on the film, it is not even necessary to disconnect the film from either reel until the film is to be changed for a different subject.

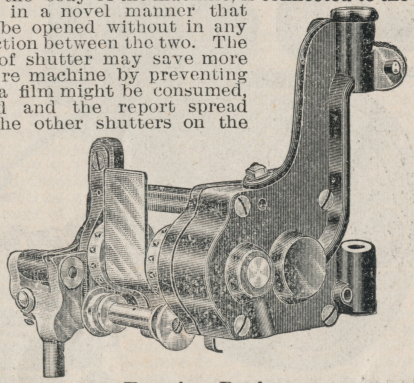


Position of Crank when Rewinding Film

The Fireproof Film Magazines and four roller traps are a wonderful improvement that is fully described on another page.

The Automatic Safety Fireproof Shutter is absolutely the only safe shutter that has been designed for this class of work. The shutter is direct connected to a spring ball governor and does not have to depend on friction, gravity or air pressure as in other forms, but is closed by the action of the spring. The Ball Governor has proven its reliability by its universal use on the Steam Engine and the Talking Machine. The governor, which is located in the body of the machine, is connected to the shutter on the film gate in a novel manner that allows the film gate to be opened without in any way disturbing the connection between the two. The automatic safety fireproof shutter may save more than the cost of the entire machine by preventing a single accident where a film might be consumed, the audience stampeded and the report spread broadcast. Several of the other shutters on the market will stand open while the film is not in motion. A fireproof shutter is a necessity, but when you get one, be sure it is reliable. That's the Motiograph Shutter. This feature is original and exclusive, and a patent has been applied for.

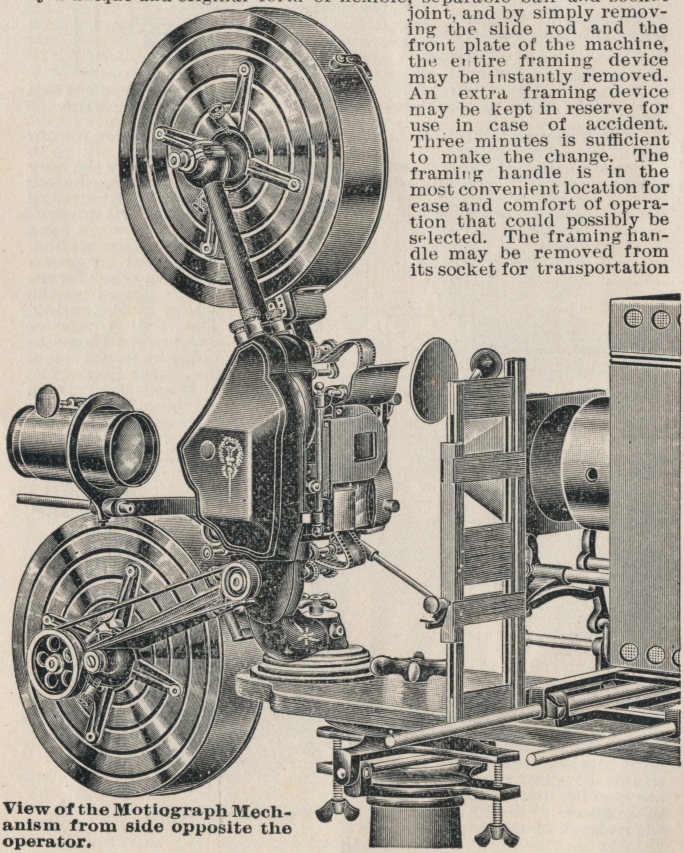




Framing Device.

The Motiograph Framing Device is the most perfect and practicable arrangement that has ever been devised for the purpose. It allows an adjustment of consider-

ably over one picture, and in bringing the margin of the picture to a point that will match the margin of the light aperture it does so without disturbing any other part of the mechanism. The fact is, nothing but the Geneva Intermittent Pin Wheel and Star, the sprocket wheel and idler roller are carried on the framing device. The Pin Wheel and the Star are entirely enclosed, thus protecting these two parts that are most vital to the life and accuracy of the machine, from dirt and accident, besides retaining the oil. In other machines the framing device carries the shutter up and down, by reason of which the wing must be made larger, which considerably shortens the exposure of the picture and lengthens the non-exposure. The result is a greater amount of flicker. The framing device is connected to the driver gear by a unique and original form of flexible, separable ball and socket joint, and by simply removing the slide rod and the front plate of the machine, the entire framing device may be instantly removed. An extra framing device may be kept in reserve for use in case of accident. Three minutes is sufficient to make the change. The framing handle is in the most convenient location for ease and comfort of operation that could possibly be selected. The framing handle may be removed from its socket for transportation



View of the Motiograph Mechanism from side opposite the operator.

by giving it a few turns to unscrew it. A patent on this framing device has been applied for.

Note.—By "framing" is meant the act of shifting the film to make the margin of the picture coincide with the margin of the light opening in the machine.

Flanged Sprocket Idle Rollers are a great improvement that is original and is the subject of a patent. By their use the film is guided by its edges instead of depending on the sprocket teeth and the perforations, the latter of which, if imperfect or damaged, cannot be depended upon. When a film runs off the sprocket wheel it is almost sure to be seriously damaged, sometimes ruined for a considerable distance, but with the flanged rollers properly adjusted there is no danger from this direction.

The Absence of Noise is an important feature in the Motiograph. There is probably no other element that so seriously handicaps all efforts in the line of producing a high-class motion picture exhibition as a noisy machine. In the Motiograph the noise has been subdued by a combination of good workmanship, design, and the enclosing of the working parts. With the Motiograph it is not necessary to keep a piano, orchestra, or other musical instrument going to cover the noise while showing the Motion Pictures.

Enclosed Gears and other working parts are positively original in the Motiograph, and is a feature of the utmost importance. In public places there is unavoidably a great deal of dust. It is brought in on the feet and stirred up by the continuous stream of incomers and outgoers and naturally finds lodgement on any moist surface, such as the lubricated parts of a machine. Much of the dust is fine sand and grit, which gets into the bearings and other working parts, clogs them up, and quickly wears out and destroys the machine, besides rendering it at a very early date incapable of doing accurate work. Enclosed parts are of advantage also in that they preserve the oil longer and subdue the noise of the working parts.

The gears of the Motiograph are readily accessible for oiling, etc., by loosening three thumb screws and removing the side cover.

Sewing, mowing and other machines were at one time made with open gears and working parts, but experience prompted a change to the modern type with enclosed parts. The Motiograph is strictly ahead of the times in the Motion Picture line.

The Motiograph Take-Up is not only entirely practicable and a thorough success, but in our estimation is necessary for the proper handling and care of the film. We are aware of the fact that there are take-ups on the market which are practicelly worthless, but the Motiograph Take-up is not only equal to every requirement and is a pleasure to operate, but is absolutely guaranteed. By its use the film is kept clean, is prevented from becoming entangled, scratched and torn, and is also protected from loss by fire in case of accidental ignition. The Motiograph Take-up is operated by a wide flexible **flat belt,** the tension of which is regulated by an adjustable idler pulley, which insures a positive uniform tension as well as a positive and continuous movement of the reel without the danger of tearing the sprocket holes in the film. The adjustment of the idler is accomplished by a set screw which is held in place by a check nut, and if the adjustment is made with reasonable care it may be depended upon absolutely. Such cannot be said of machines operated with round belts, which are naturally stiff, stubborn and unreliable.

The Take-up Feeding Sprocket is made a part of the Motiograph. While many machines are sold without them, we consider it a necessary part of the Motion Picture Machine, whether using a take-up or running films into a bag or box, because it is necessary not only for the safety of the film, but for the steadiness of the picture. This fact will be obvious to anyone that is familiar with the finer details of Motion Picture projection work.

The Indexed Turn Table Base permits of the mechanism being turned a quarter turn either way, which is a great convenience for oiling, inspection, etc. It may be turned by loosening a single thumb nut, and as quickly clamped in place with vise-like firmness. It is indexed to indicate the proper location.

The Frame of the Motiograph is made in one solid piece of the finest quality of gray iron, and being made hollow it possesses the greatest possible strength in proportion to the amount of material used. Its rigidity prevents the vibration that is very much in evidence in the pictures projected by other machines.

Strength and rigidity are absolutely necessary to steady pictures, as well as for durability, and in this respect the Motiograph mechanism is a marvel. While being designed, this object was kept prominently in view as being of the utmost importance. As previously stated, the slightest vibration in the mechanism will produce dancing or vibration of the picture on the screen that is very disagreeable.

The Reel Arms are of tapered cylindrilcal form, being hollow in the center, which not only gives them a most artistic appearance, but combines the greatest possible strength with the minimum of material. They are fitted to accurately machined surfaces, which insures absolute accuracy for the alignment of the film, a feature not to be found in any other machine. The arms are held in place by three artistic thumb screws in each. By an ingenious arrangement the thumb screws cannot fall out of the reel arms when the arms are detached.

The Crank is made detachable and is held in place by a neat little thumb screw, which engages in a groove in the main shaft. The thumb screw furnishes a positive fastening, which prevents the possibility of the crank accidentally becoming disengaged, and causing no end of annoyance in the middle of an exhibition. Another thumb screw locates the crank in the crank boss for engaging and disengaging the rewind mechanism.

The Spring Gate Catch used on the Motiograph is not only unique and simple, but is most convenient and effective. It is located at the most convenient point and a touch of the finger releases the gate. By the action of the film pressure springs, it is thrown open.

The Heat Arrester Plate on the film gate serves a double purpose—first, it protects the gate proper from the intense heat from the condensing lenses, which in turn would convey the heat to the pressure springs, and do more or less injury to the film; second, it serves as a shield and a protection to the automatic fire shutter.

The Aperture Plate, the Sprocket Wheel and the Sprocket Idlers have been designed with great care to avoid contact with the picture surface of the film. The arrangement by which this is accomplished prevents the unsighly scratches on the film which shows in the picture like rain or flashes of white.

An Adjustable Bracket for the Stereopticon lens is attached to the left front side of the mechanism frame. The Stereopticon lens may be accurately adjusted for height by a thumb screw, and for longitudinal position by a sliding adjustment, and is held firmly and in proper alignment.

The Motiograph Reel is universal and is made with the same care, the same class of workmanship, and from the same carefully selected material that is found in the body of the machine. A reel of good quality is essential to the proper care of the film. The sides are made of good smooth material, all edges carefully rounded, and are mounted on the core blocks to run true. They will fit and may be used on any standard machine.

Separable Reels may be had with the Motiograph when so specified in the order. By their use, it is not necessary to carry a reel for each roll of film. The rolls may be changed almost instantly, on and off a single reel, thus affording an advantage not alone in economy, but in making the outfit lighter and more compact for transportation. The reels are made of strong material and are lightened as much as is practicable by large perforations.

Interchangeable Parts are one of the special features of the Motiograph. At a great expense a most complete set of special tools, dies, jigs, etc., have been made for the manufacturing of this machine. In fact, each and every part is made with a special tool, and some parts require many special tools. Not only has the set of tools been made complete, but every one has been finished as accurate and as perfect as practicable.

Interchangeable parts afford a great convenience to the operator, for, in case of accidental breakage of any part, a new part may be had from stock to take its place.

The Bearings for all of the high speed journals or pivots are made of phosphor bronze, which is the best anti-friction metal known for the purpose, are held in place by screws, and in case of wear they may easily be replaced with new ones.

Standard Gauge.—The Motiograph mechanism is designed to use the standard gauge film, which is in universal use the world over. While the perforations of the film made by different manufacturers are slightly different, the proportions of the sprocket teeth have been carefully designed with a view to securing the best possible results with all the different makes. This cannot be said of other machines.

Simplicity is a very strong point in favor of the Motiograph mechanism, as will be noted by comparison with other machines. No parts have been used that are not considered absolutely essential to the production of the results to be attained. Every part that comes in hourly use by the operator occupies the most convenient location, and its construction and manipulation is so simple that the most inexperienced will have no difficulty in immediately acquiring a knowledge of its operation.

The Design of the Motiograph mechanism will be readily recognized by those familiar with the business as a radical departure from those in general use, and there are several reasons for this radical departure, viz: a desire to obtain the maximum of strength with the minimum of material; that the working parts should all be enclosed; to have every working part in the most convenient location; and to combine with strength and rigidity the best possible artistic effect.

The Finish of the Motiograph mechanism is most artistic and durable and quite in keeping with the beautiful outlines and well balanced proportions. The frame, reel arms and magazine spiders are heavily coated with black enamel. The frame and arms are ornamented with a dainty striping, while the ornamentation of the frame proper is supplemented by small decalcomania designs. The front plate, the film gate, the crank, the framing handle, the swivel clamp nut, the take-up pulleys, sprocket idler brackets and other trimmings are nickel-plated and polished. The heat arrester plate on the film gate has a spotted copper-oxidized finish. The extension tubes, focusing ring, and telescope tube of the objective lens are nickel-plated, while the jacket or body of the lens and the upper and lower feeding sprockets are polished brass, protected with a greenish tint of imported lacquer. The fireproof magazines have a spotted copper-oxidized finish. The beauty of the combination must be seen to be appreciated.

The Objective Lens used on the Motiograph is the A. C. R. Special, the beauty and proportions of which are not approached by any other. The glasses are of the maximum standard size, and are carefully and accurately finished and focused, with a view to securing the maximum amount of illumination, with sharp and uniform detail in the picture. The quality of the Motiograph lens is strictly high grade in every regard, is excelled by none and is far superior to the average.

The Spiral Focusing Ring of the A. C. R. Special Lens, with triple bead knurled focusing band, is absolutely unapproached for ease and accuracy in focusing, convenience, neatness of design and finish. The jacket is finished in a rich yellow Egyptian bronze lacquer; the focusing band and lens tube are nickel-plated and the cells are finished in black enamel. The different colors are thus combined to bring about

the most artistic effect. This new style lens mount is in keeping with progress in high grade photo lenses, is a very marked improvement over the old style "rack and pinion" focus movement, and, furthermore, it is not liable to injury in transportation. The Motiograph may be had with other styles of lenses when desired.

A Wide Range in Size of Pictures may be projected by the use ot the A. C. R. Special Interchangeable lens cells, which enables the operator to locate his machine in any part of the hall that is most convenient, and yet project a picture of suitable size.

The Interchangeable Lens Cells are responsible for a **Great Economy** in lens purchases. By their use only one lens body is required, and that is the best that can be made. Different sizes of pictures may be projected without changing distance between machine and screen, by simply changing the cells in the lens. The cells are all marked with numbers to avoid the possibility of mistakes in seleetion.

An extension collar is required and is furnished with each complete lens or pair of lens cells (except the 3 inch and 4½ inch, which require none) to locate the mounting the proper distance away from thc film to bring the lenses into focus. A "Table of Sizes" showing the different sizes of pictures that may be projected with the different lenses at different distances, and a complete description of the A. C. R. Special lenses will be found under the heading "Motion Picture Lenses." When ordering extra lens cells always state if they are to be used on the Motiograph.

Extreme Short Focus Lenses may be used with the Motiograph, owing to the location of the shutter, which is unusually near to the film—an arrangement that is accomplished by the peculiar construction of the Motiograph. Certain classes of work, where it is necessary to produce a very lage picture compared to the distance the machine is located from the screen, can be produced only with a very wide angle lens, and such a lens can be used only where the location of the shutter will permit. The Motiograph is admirably adapted for this class of work.

The Electric Motor Attachment which has been designed to fit the machine may be added at any time. The pulley support is attached by machine screws to the gear cover, and has a loose socket connection with one of the spindles under the gear cover. The pulley takes a flat belt which is most reliable and desirable, and an idler pulley with screw adjustment provides a most perfect adjustment for the belt.

The Slide Carrier Swing is another important Motiograph improvement. By its use the slide carrier used for showing Stereopticon views may be instantly swung out from in front of the condensing lenses, thus allowing the use of the entire amount of illumination that passes through them, which means a saving of about 50 per cent over what is available when the slide carrier is allowed to remain in its normal position.

The Motiograph Lamp House is furnished in three styles, viz: The "Plain," the "Lid Off Wide Open" and the "Underwriters' Lid Off" Lamp House.

The Plain Motiograph Lamp House is made of best Russia iron, and opens on the side and rear only. It is the style in most general use in the smaller towns and cities, where it is not necessary to comply with special laws.

The "Lid-off Wide Open" Lamp House means just what the description says. The top opens entire and almost the entire right side opens. These features are of the greatest possible advantage and fill a long-felt want by those who are running continuous shows, which makes it necessary to change the carbons while the lamp house is hot.

The above are features not heretofore to be found in any other machine. Another advantage is that the lamp house is unusually large and roomy. It has porcelain bushings for the entrance of the wires. Ample ventilation is provided by a series of openings at top and bottom on both sides. The openings are covered with perforated sheet

metal to prevent the exit of sparks from the carbons. The longitudinal swing for adjustment to the various lengths of foci of condensing lenses is six inches.

The Style B "Lid-off Wide Open" Lamp House, as above described, meets all ordinary requirements for fireproof protection.

The **Style C, "Underwriters' Lid-off" Lamp House** is the same as the preceding except that it has a smaller side door that is held shut by a strong spring hinge and has a heavy wire basket on the top to prevent contact with anything that might become ignited through contact with the lamp house. It also has a supplementary bottom made of Transite Board, which is an asbestos composition. The lid of Wide Open Asbestos Lamp House may be converted into the "Underwriters' Lid-off at any time by the addition of the wire basket, supplementary bottom, and the spring door which is mounted on a panel that is attached to the lamp house by four screws.

The Burner Slide has long bearings and is of unusually rigid construction. The longitudinal adjustment is accomplished by means of a hand wheel in the rear of the lamp house.

The Condensing Lenses are mounted in a nickel-plated telescopic mounting which is held in place by two screws and two eccentric clamps. The mounting is easily and quickly removed for cleaning or changing the lenses.

A Dowser Shutter is mounted on the front of the cone and is convenient for shutting off the light to safeguard the film, especially when using a machine that is not equipped with the automatic fireproof shutter. It is also of value in many cities where the fire ordinances are very rigid. The shutter may be used either on the top of the cone or on the left side. When used on top it is held either open or shut by a ball weight, and is opened and closed by a touch of the hand. It is located in the most convenient place possible for the operator. When located on the left side of the cone the shutter is to be held open by a foot treadle, which, when released, allows the shutter to close automatically. The dowser shutter may be changed from one location to the other by removing the cone and turning it. The cone is held in place by two dowel pins and two thumb screws.

The "Motio" Universal Arc Lamp is another special Motiograph production and is furnished with the Motiograph No. 1 complete equipments. Besides being heavy and strong and adapted in every particular for use on heavy currents, it is provided with improved heavy carbon clamps, which not only furnish ample contact surface to prevent short circuiting, but are sufficiently strong to serve all requirements. The carbons are held firmly between two strong jaws, and are clamped in place by a single thumb screw. The carbon clamps will hold firmly the entire range of sizes of carbons that are in general use.

All Hand Wheel Adjustments for Focusing are a special feature of the "Motio" Universal not to be found in any other arc lamp. This is a feature that will be much appreciated by experienced operators. Arc lamps have been in use with two hand wheel adjustments, but the "Motio" has all three, viz: vertical, sidewise and endwise. With the hand wheel adjustments the point of illumination may be accurately, quickly and positively adjusted to the focus of the condensers. Each adjustment it entirely independent of the other, which enables the operator to correct any one without disturbing the others. The vertical and sidewise adjustments and the carbon feed have flexible ball joint shafts or arbors, which permits of their being located stationary at the point where they pass through the rear of the lamp house. This arrangement is a very great advantage to the operator, as it enables him to get closer and quicker adjustments than would otherwise be practicable. All parts of the "Motio" Universal Arc Lamp are made accurate and strong. The material is brass, nickel-plated. The adjustment features of the "Motio" Universal are the subject of a atent applied for.

The "A. C. R." Underwriters' Reostat is another improvement that is well suited to become a part of the Motiograph No. 1 Complete

equipments. The A. C. R. Underwriters' Model will be found illustrated and fully described on another page. The Motiograph may also be had with other rheostats.

Time for Improvement.—There is probably not a dealer that is actively engaged in the business who has not heard many times from owners or managers of Electric Theatres statements similar to the following: "I would like to have a new machine, but I do not find anything on the market that comes up to my ideas of what a machine should be." We are pleased to be able to say that this class have found in the Motiograph just what they have been looking for.

The Motiograph is the only machine of distinctive design that has been originated and constructed since the advent of the Motion Picture Theatre, and as the Motion Picture Theatre has introduced new and most trying problems to be met in the Motion Picture line, the Motiograph was designed with a view to meeting every possible requirement; hence, in this particular, it has a decided advantage over machines that were designed prior to the introduction of this class of work, also those of recent construction that have been copied largely from the older designs.

For Motion Picture Theatre Work the requirements are most exacting. The patronage depends largely upon the quality of the pictures. The quality of pictures may be produced only with a machine of quality. The purchase of a good machine should not be looked upon as an expense in the starting of a Motion Pioture Theatre, but as an investment, because, with the exception of the care of the machine, the expense ceases with the purchase of the same. While with the purchase of a cheap machine it may be well charged to expense, because it will not only be a continued source of expense, but will have to be replaced in a comparatively short time with a new machine.

The Best Film Service may be had from the film renting companies only when using a first-class machine, because the film renting companies are inclined to favor those who take good care of their films. When using the **Motiograph** you may expect to get the best possible film service if you are renting of a good company.

The Traveling Exhibitor will find that a machine that is adapted to the requirements of the Motion Picture Theatre is equally well adapted to his work. There is every reason why everything should run absolutely smooth with the show given by the traveling exhibitor. As a rule he is but one night in a place. He crowds a long entertainment into a comparatively short space of time. There is a set time for it to begin and approximately so for it to close. A single hitch in the proceedings practically ruins the entertainment. With the more progressive traveling exhibitors of today it is customary to intersperse their stereopticon views with motion picture films, ranging in length from fifty to a few hundred feet, and in order to avoid delays it is customary to make the films up into reels of about one thousand feet each, and in order to meet these requirements, have a machine that will handle one thousand feet of film properly, and at the same time project a steady and brilliant picture, and give the people their money's worth, he should have the best machine that money will buy.

The Designer of the Motiograph is not new at the business, as is the case with the designers of many new machines that have made their appearance on the market. He has been connected with the motion picture business since the time it first became a commercial success in the United States, and has been constantly associated with the business ever since. He is the inventor of a large number of patented articles that has been in general use, and many others that are in course of preparation for optical projection purposes.—a number that is probably three times greater than the useful patents issued to any other person or conoern in the optical projection line, His inventions cover several distinct types of motion picture machines. It is absolutely essential that an inventor in any line should have the most thorough experience, and while it is quite easy to acquire the knowledge necessary to operate a good machine successfully, it is quite a different

matter when it comes to the invention and designing, and requires all the knowledge that can be acqured by many years of constant application. This accounts for the fact that some machines may possess one good point to the almost utter disregard and exclusion of all the rest of the points that are of vital importance.

It should be remembered that steady pictures and durability are the results of correct design, accurate workmanship, and high grade materials. The desire to attain these three objects is responsible for the great care that has been taken in the designing and construction of the machine, together with the selection of the materials.

The Workmanship is a feature of Motiograph construction of which we are especially proud. Profit has been sacrificed at every turn by finishing each and every part as thorough and accurately as is practicable. We especially solicit a comparison by those who have sufficient mechanical knowledge to understand what good workmanship is, which, if carefully done, we believe will be nothing short of a revelation.

Patents on the Motiograph.—The Motiograph is protected by six patents granted and applied for, which, we believe, is twice the number of patented improvements in use on any other machine.

Remember that the "basic principles" that form the foundation of the Motiograph are fully covered, and that infringers, whether makers, sellers or users, are liable to vigorous prosecution.

Dimensions of the Motiograph No. 1 Mechanism are approximately as follows; Height from bottom of round base to top of body, 13 inches; to center of light opening, 8¾ inches; to center of light opening, when on sliding base, 8¾ inches; to upper reel arbor, 19⅛ inches; length from film to front of lens threads in front plate, 4 inches; width with handle removed, including crank boss, about 8½ inches; length of crank from center of main shaft to center of of lens handle, 4¾ inches; width of turntable base at bottom, 5 inches; diameter tube, 1⅞ inches.

Weight of Mechanism, including upper and lower reel arms, sub-base, crank and M. P. lens, 28 lbs; lower reel arm, 2½ lbs; upper reel arm, 2 lbs: fireproof magazines, including spiders, per pair, 7½ lbs.

Dimensions of Lamp House.—Height to center of condensing lenses, 8¾ inches; length of house, 10⅛ inches; width, 6 inches; height, 12¾ inches; backward and forward swing, 6 inches; side swing, 8 inches.

Weight of Lamp House, complete, including double sliding base, baseboard and arc lamp (with condensers and slide carrier, complete), about 36 lbs.

The Price of the Motiograph is low considering the quality. It is not the intention to sell it in competition with cheap machines. The design is different, the material is different, the workmanship is different, and the quality of the work it does is vastly different. The price is about the same that is asked for some other machines, but the quality is very much superior in every regard.

We feel confident that if it were practicable for each and every one who is considering the purchase of a Motion Picture Machine to be able to personally examine the Motiograph, and see the pictures it projects, side by side with any other machine that he may be considering, we would find it easy to make the sale in every instance where the selection was intelligently made.

MOTIOGRAPH NO. 1, MODEL 1908, MOTION PICTURE EQUIPMENTS

The Motiograph Motion Picture equipments consist of Motion Picture mechanism on swivel base, lamp house on sliding base, motion picture lens and stereopticon lens, and are designed for the projecting of both motion pictures and stereopticon or lantern views, being so arranged that the change from one to the other can be quickly made. While these equipments are designed especially for the use of the Motion Picture Theatre, they are equally well adapted to the requirements of the traveling exhibitor.

The Motion Picture mechanism in the following equipments is the same as described on the preceding pages. The motion picture lenses are known as the "A. C. R. Special," and may be had in varying lengths of foci, ranging from 3 inch to 8 inch.

The stereopticon lens is a special feature with the Motiograph equipment in that without additional charge the full one-half size mount is furnished in any focus ranging from 10 inch to 18 inch inclusive. These lenses are of very high grade and have extra well-finished mounts. By the use of the large size mounts, the diameter of which is 2¾ inches, and lens glasses to match, a greater aperture is available for the passage of the light, which permits of greater illumination for the picture; is easier to focus; has greater depth of focus; is better adapted for projecting at an angle up, down or sidewise; gives a more brilliant picture; and is in every way better than to use one-fourth size mounts when the machine is located more than thirty feet from the screen. For the half size lenses of 21 to 24 inch focus an additional charge of $1.50 will be made.

When stereopticon lenses of less than 10 inch focus are required, they will be furnished only in one-fourth size mounts, in which case an allowance of $3.00 will be made from the price quoted for the equipments.

Motiograph Motion Picture Equipment "A"

INCLUDES

Hand Power Motiograph Mechanism No. 1, with automatic fireproof shutter and swiveled base
Upper Reel Arm
Take-up Reel arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Upper and Lower Fire Shields for film gate
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid-off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Lamp House Cone and Dowser Shutter
Extra Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Pair of Film Magazines, upper and lower, with four roller adjustable fire traps
Gibraltar Swiveled Pedestal Stand, enamel finish
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "A", complete as above, boxed and crated for shipment.....**$212.00**

Weight of Equipment "A" net, about 135 lbs.
Weight of Equipment "A" boxed and crated, 250 lbs.

Motiograph Motion Picture Equipment "A. U."

Equipment "A U" is the same ae Eqipment "A" except that it includes Underwriters' Wire Screen lamp house hood, Paneled Side Door with spring hinge, and auxilliary Bottom of transit asbestos board.

EQUIPMENT "A U" INCLUDES

Hand Power Motiograph Mechanism No. 1, with automatic fireproof shutter and swiveled base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Upper and Lower Fire Shields for film gate
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Underwriters' Galvanized Wire Hood for lamp house top
Paneled Side Door, with spring hinge
Auxiliary Lamp House Bottom of Transite Asbestos Board
Lamp House Cone and Dowser Shutter
Extra Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Pair of Film Magazines, upper and lower, with four roller adjustable fire traps
Gibraltar Swiveled Pedestal Stand, enamel finish
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "A U", complete as above, boxed and crated for shipment.....**$220.00**

Weight of Equipment "A U" net about 138 lbs.
Weight of Equipment "A U" boxed and crated, about 255 lbs.

Prices on Sundries and Allowances for Omissions

Will be Found on Page Following the List of Equipments.

Motiograph Motion Picture Equipment "B"

Equipment "B" differs from equipment "A" in that the Gibraltar Swiveled Pedestal Stand is omitted, and telescopic extension legs and sockets for same substituted and it has a lighter base board.

EQUIPMENT "B" INCLUDES

Hand Power Motiograph Mechanism No. 1, with automatic fireproof shutter and swivel base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Upper and Lower Fire Shields for film gate
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Lamp House Cone and Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Pair of Film Magazines, upper and lower, with four roller adjustable fire traps
Telescopic Extension Legs and Sockets for same
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "B", complete as above, boxed for shipment..... **$200.00**

Weight of Equipment "B" net, about 75 lbs.
Weight of Equipment "B" boxed, about 185 lbs.

Motiograph Motion Picture Equipment "C"

Equipment "C" differs from Equipment "A" in that the Gibraltar Swiveled Pedestal stand, film magazines and lower shield are omitted, and telescopic extension legs and sockets for same included and it has a lighter base board.

EQUIPMENT "C" INCLUDES

Hand Power Motiograph Mechanism, with automatic fireproof shutter and swivel base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Upper Fire Shield for film gate
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
'Lid-Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Lamp House Cone and Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Telescopic Extension Legs and Sockets for same
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "C", complete as above, boxed for shipment..... **$180.00**

Weight of Equipment "C", net, about 70 lbs.
Weight of Equipment "C" boxed, about 180 lbs.

Motion Picture Equipment "D"

Equipment "D" differs from Equipment "A" in that the Gibraltar Swiveled Pedestal Stand, film magazines and lower shield are omitted and it has a lighter base board.

EQUIPMENT "D" INCLUDES

Hand Power Motiograph Mechanism, with automatic fireproof shutter and swivel base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Upper Fire Shield for film gate
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid-Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Lamp House Cone and Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "D", complete as above, boxed for shipment..... **$174.00**

Weight of Equipment "D" net, about 60 lbs.
Weight of Equipment "D", boxed, about 170 lbs.

Motion Picture Equipment "E"

Equipment "E" differs from Equipment "A" in that the Gibraltar Swiveled Pedestal Stand, Take-Up, film magazines and shields are omitted and it has a lighter base board.

EQUIPMENT "E" INCLUDES

Hand Power Motiograph Mechanism, with automatic fireproof shutter and swivel base
Upper Reel Arm
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective lens
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid-Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Lamp House Cone and Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Knife Switch and Fuse Block combined
"A. C. R." Adjustable Rheostat, Underwriters' Model
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Motion Picture Equipment "E", complete as above, boxed for shipment..... **$162.00**

Weight of Equipment "E", net, about 60 lbs.
Weight of Equipment "E" boxed, about 170 lbs.

Motion Picture Equipment "E R"

Equipment "E R" differs from Equipment "A" in that the Gibraltar Swiveled Pedestal Stand, Take-Up film magazines and shields are omitted, and instead of "A. C. R." Adjustable Rheostat Underwriters' Model being included, choice may be had of "A. C. R." Non-Adjustable, Roe Adjustable, and Special Adjustable Rheostats. It has a lighter base board.

EQUIPMENT "E R" INCLUDES

Hand Power Motiograph Mechanism, with automatic fireproof shutter and swivel base
Upper Reel Arm
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Two Ten Inch Universal Reels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
"Lid-Off Wide Open" Russia Iron Lamp House, complete, with double sliding base
Heavy Oak Base Board
Lamp House Cone and Dowser Shutter
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp. with hand wheel adjustments complete
Roe Special Sr. Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Knife Switch and Fuse Block combined
Choice of "A. C. R." Non-Adjustable, Roe Adjustable, or Special Adjustable Rheostats
Three Pieces Asbestos Covered Wire

PRICE

Motiograph Equipment "E R", complete as above, boxed for shipment..... .....**$157.00**

Weight of Equipment "E R" net, about 60 lbs.
Weight of Equipment "E R", boxed, about 170 lbs.

Motiograph "Economic" Motion Picture Equipment "F"

Equipment "F" differs from Equipment "A" in that the Gibraltar Pedestal Base, Automatic Fire Proof Shutter, Upper and Lower Film Magazines, Upper and Lower Fire Shields. "Roe Special Sr." ½ size Stereopticon Lens, "Lid-Off Wide Open" Lamp House, "A. C. R." Underwriters' Adjustable Rheostat, Extra Heavy Base Board and three pieces asbestos covered wire have been omitted, and the Telescopic Extension Legs, "Petite Sr." Stereopticon Objectiye Lens, Plain Lamp House (top does not open), Roe Adjustable Non-Adjustable, or Special Rheostat, and cotton insulated wire have been substituted.

Hand Power Motiograph Mechanism No. 1, with swivel base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A, C. R." Special Motion Picture Objective Lens
Two Ten Inch Universal Beels
Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
Plain Lamp House (top does not open), with double sliding base
Lamp House Cone and Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Motio Universal Arc Lamp, with all hand wheel adjustments complete
"Petite Sr." ¼ size Stereopticon Objective Lens
Double Slide Carrier
Telescopic Extension Legs and Sockets for same
Knife Switch and Fuse Block combined
Roe Adjustable, Non-Adjustable or Special Rheostat
Thirty feet of Flexible Cotton Insulated Wire

PRICE

Motiograph Economic Motion Picture Equipment "F", complete as above, boxed for shipment..... ....**$145.00**

Weight of Equipment "E R" net, about 70 lbs.
Weight of Equipment "E R" boxed, abont 180 lbs.

Motiograph Motion Picture Equipment "G" for Calcium Light.

INCLUDES

Hand Power Motiograph Mechanism No. 1, with automatic fireproof Shutter and swivel base
Upper Reel Arm
Take-up Reel Arm and Belt
Stereopticon Lens Bracket and slide rod
"A. C. R." Special Motion Picture Objective Lens
Two Ten Inch Universal Reels
One Piece of Ruled Mica for focusing
Oil Can with long curved spout
2 Screw Drivers
Russia Iron Lamp House, plain (top does not open), complete with double sliding base
Lamp House Cone, with Dowser Shutter
Heavy Oak Base Board
Pair of Condensing Lenses in nickel plated mount
Roe Premier Calcium Jet "D," with needle valves
Two Pieces Rubber Tubing
Motio Universal Jet Adjustment Fixture
Stereopticon Objective Lens in ½ size mount
Double Slide Carrier
Telescopic Extension Legs and Sockets for same

PRICE

Motiograph Motion Picture Equipment "G", complete as above, boxed for shipment..... **$146.00**

Weight of Equipment "G", net, about 60 lbs.
Weight of Equipment "G," boxed, about 170 lbs.

NOTE:—In ordering equipments, it is always advisable to include one or two additional condensing lenses, so as to be prepared for breakage, which is liable to occur at any time.

The Gibralter Swiveled Motion Picture Pedestal Stand, may be had with any of the preceding Motiograph Equipments, when desired, instead of the telescopic extension legs and sockets, painted finish, at an additional cost of..... **$9.00**

The Gibralter Swiveled Motion Picture Pedestal Stand may be had with any of the preceding Motiograph Equipments, when desired, instead of the telescopic extension legs and sockets, enameled and decorated finish, at an additional cost of..... **$12.00**

MOTIOGRAPH SUNDRIES.

Take-Up, with thumb screws, Belt Adjuster, Belt and 10 inch Reel..... **$15.00**
Framing Device, complete, including Sprocket Wheel, Idler Roller, etc., as illustrated..... **$24.00**
Belts, extra, for Take-Up, each..... .45
Reels, Universal, 10 inch..... 1.00
Reels, Separable, 10 inch..... 1.50
Reels, Separable, 8 inch..... 1.00
Reel Clamp, Universal, for clamping the reel on the reel shaft, each..... 1.25
Lens Cells, "A. C. R." Special, for Motiograph Motion Picture Machine, 3 inch focus, complete..... 6.00
Lens Cells, "A. C. R." Special, for Motiograph Motion Picture Machine, 3½ inch focus, complete with extension collar..... 6.00
Lens Cells, "A. C. R." Special, for Motiograph Motion Picture Machine, 4 inch focus, complete, with extension collar..... 6.00
Lens Cells, "A. C. R." Special, for Motiograph Motion Picture Machine, 4½ inch focus, front and rear..... 6.00
Lens Cells, "A. C. R." Special, for Motiograph Motion Picture Machine, 4¾ inch, 5¼ inch, 6 inch, 6½ inch, 7 inch, 7½ inch and 8 inch, front and rear, including extension collar..... 6.50

The 3 inch, 3½ inch and 4 inch cells arecomplete in mount that screws into the rear of the lens body. All the others are separate for front and rear. The 3 inch and 4½ inch need no extension collars; all of the others do. In ordering be sure to state that they are for the Motiograph machine.

Lens Ring, threaded inside, for holding stereopticon lens on the mechanism rod and bracket..... $1.20
Adaptors, screw rings, for reducing ½ to ¼ size, each..... .75
Lens Bracket, without slide rod 1.20
Slide Rod, for lens bracket..... .45
Motiograph Fireproof Magazines, upper or lower, each..... 10.00
Upper Fire Shield..... 1.50
Lower Fire Shield..... 1.50
Electric Motor, ⅛ H. P., for operating Motion Picture machine. This motor is of special high grade, and must not be compared with motors of the ordinary type. It is well finished in every respect, and is dependable. It is furnished for direct current, 110 volt. Including speed regulator, Price... 28.00
Electric Motor, ⅛ H. P., as above, but for 220 volt direct current, including speed regulator. Price..... 30.50
Motor Hanger for Electric Motor. ⅛ H. P. The hanger consists of a base plate on which the motor is mounted, and which is connected to the top plate by four strong posts. The top plate is arranged for attaching underneath the baseboard of the motion picture machine. It is made especially for use with above motor. Price 6.00
Speed Regulator Bracket for attaching the speed regulator to the baseboard of the motion picture machine, Price..... 1.50
Motor Pulley, with support, idler, belt adjustment and gear cover, complete for Motiograph Motion Picture Machine. Price..... 10.00

ALLOWANCES

In making allowances for parts omitted from the equipments, we are unable on some parts to allow full list prices, owing to the fact that the equipment is listed at less than what it would be if listed at the total of the prices for individual articles.

Film Magazines, allowance, if omitted, each.....$10.00
Take-up Reel Arm and Belt, allowance, if omitted..... 12.00
"A. C. R. Special" Motion Picture Objective Lens, allowance, if omitted 6.00
Stereopticon Objective Lens, ½ size, allowance, if omitted.. 8.00
Stereopticon Objective Lens, ¼ size, allowance, if omitted.. 4.50
Stereopticon Objective Lens, allowance if ¼ size mount is ordered where ½ size mount is quoted 3.00
Safety Fireproof Shutter, allowance, if omitted..... 6.00
Fire Shields, upper or lower, allowance, if omitted, each..... 1.00
Telescopic Extension Legs and Sockets for same, allowance, if omitted 6.00
"A. C. R." Non-Adjustable or Roe Adjustable Rheostats, allowance, if omitted..... 8.00
"A. C. R." Adjustable Rheostat, Underwriters' Model, allowance, if omitted..... 12.00
Roe Adjustable or "A. C. R." Non-Adjustable Rheostat instead of "A. C. R." Adjustable, Underwriters' Model, allowance 5.00
Knife Switch and Fuse Block, allowance, if omitted..... 1.25
Three Pieces Asbestos Covered Wire, allowance, if omitted 2.00
Plain Lamp House instead of "Lid-off Wide Open," allowance..... 3.00
Gibraltar Swiveled Pedestal Stand, allowance, if omitted... 20.00
Painted Gibraltar Pedestal Stand instead of the better finished and enameled stand, allowance..... 3.00

MOTIO-GRAPH

Model 1908 Mechanism

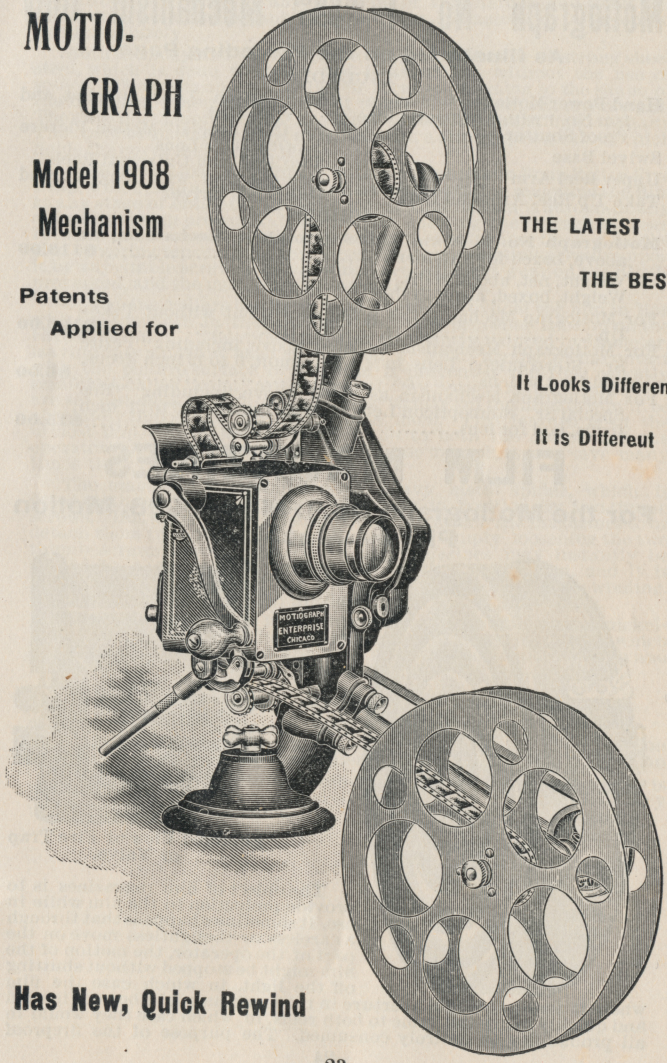
Patents Applied for

THE LATEST

THE BEST

It Looks Different

It is Different



Has New, Quick Rewind

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Motiograph No. 1 Model 1908 Mechanism Only

As Illustrated on the Preceding Page

INCLUDES

Hand Power Motiograph Mechanism No. 1 with Automatic Fire Proof Shutter
Swivel Base
Upper Reel Arm
Take-Up Reel Arm and Belt
Stereopticon Lens Bracket and Slide Rod
"A. C. R. Special" Motion Picture Objective Lens
Two Ten Inch Universal Reels
One Oil Can with long curved
One Screw Driver

PRICE

Motiograph No. 1, Model 1908 Complete Mechanism, as above, boxed for shipment..... **$118.00**

Weight, net, about 28 lbs.
Weight, boxed, about 35 lbs.

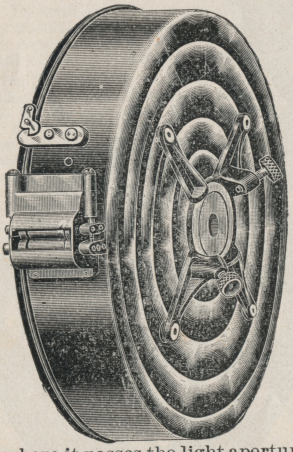
For Motiograp Mechanism as listed above, but without Take-Up..... **$106.00**

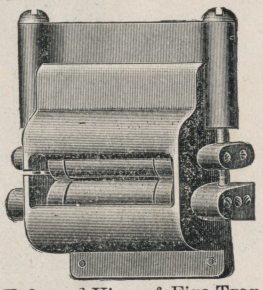
For Motiograph Mechanism as listed above, including "Petite Sr." Stereopticon Lens in ¼ size mount, 6 to 12 inch focus, add for the lens..... **$6.00**

For Motiograph Mechanism as listed above, including "Roe Special Sr." Stereopticon Lens in ½ size mount, 12 to 21 inch focus, add for lens..... **$15.00**

FILM MAGAZINES

For the Motiograph No. 1, Model 1908, Motion Picture Machine.





Enlarged View of Fire Trap or Valve.

The object of film magazines is to provide protection to the film while in use. It sometimes happens that through a careless or thoughtless move on the part of the operator, the motion of the film might be stopped without shutting off the light, in which case the film where it passes the light aperture in the machine might become ignited and quickly carry the flame to both reels, in which case they would in all probability be entirely consumed. The purpose of the fireproof

magazines is to prevent any accident of this nature, and to fill this requirement the Motiograph Fireproof Film Magazine can be depended upon absolutely.

Both the body and the lid of the magazine is made of strong sheet steel, which is spun to shape and is assembled without the use of solder. The magazine is circular in form, conforming to the shape of the reel, hence there is no waste of space, and no superfluous weight. They are much more artistic and more convenient than if made square. The cover of the magazine is provided with a strong spring catch, which holds the cover securely in place.

Each magazine is equipped with an Automatic Four Roller Fire Trap, which is so arranged that it may be opened for removing the film at any stage of either the projection or rewinding, and is automatically closed by spring pressure. The film on entering the magazine passes between the two pairs of rollers which are held in close touch with the film by spring tension, but are prevented from exerting pressure upon it by adjustable screw stops, by which arrangement wear on the film is prevented, and the machine will run easier.

One of the rollers has flanges on each end to hold the film in line with the aperture in the fire trap, and this prevents friction on the edge of the film. The rollers are also all slightly reduced in diameter, leaving only a narrow band at each end, by which arrangement contact with the picture surface of the film is prevented and the unsightly scratches, called "rain," are prevented. As these two pairs of rollers are set just close enough not to press tightly on the film, it would be absolutely impossible for fire to pass them. This feature is of the utmost importance, and of great value to both the owner and the operator, for at any moment a pair of these magazines may save many times their cost.

The magazine is mounted on a heavy metal spider, which is fitted on the reel arm and is held firmly in position by two thumb screws. But a few moments are required to attach the magazines to or detach them from the reel arm heads. By simply loosening the two thumb screws above referred to, the magazines may instantly be turned to a convenient position for rewinding the film, and it is unnecessary to remove either the magazines or film for rewinding. This feature is illustrated in the description of the mechanism.

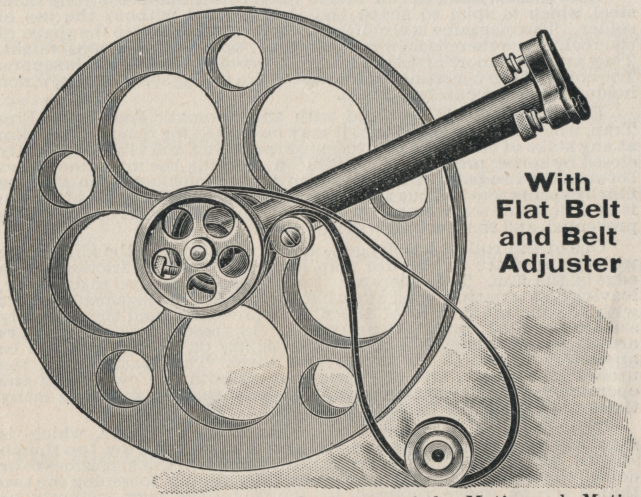
The spider is finished in black enamel, the thumb screws nickel-plated, and the magazine has spotted copper oxidized finish, over which is a coat of lacquer. They are neat and artistic in both design and finish, and are strong and unusually well made.

PRICES

Motiograph Film Magazine, with four roller fire trap and spider, complete, each..... **$10.00**
Fire Trap, or Valve, with four rollers, adjustable, each..... **4.50**

NOTE.--In ordering state whether the lower or upper magazine is required, as the two are mounted slightly different, in order that they may stop at the proper point.

Motiograph Take-Up Attachment



While the Take-up is properly a part of the Motiograph Motion Picture Machine and should always be included in the original order, there are some who, for reasons of their own, may desire to order the machine without the take-up, for which reason we have listed it without the take-up and list the take-up herewith as an attachment.

There are some who have the impression, from experience with unreliable apparatus, that the take-up is not satisfactory, and while such an opinion is correct as regards some of the apparatus that is on the market, it does not in any manner apply to the Motiograph Take-up. The Motiograph Take-up is not an experiment. It is strong, reliable and is a necessary element to a first-class motion picture machine. It serves as a protection to the film, prevents it from becoming entangled and often torn as when using a floor magazine, box or bag, and is a great convenience to the operator, who, after having used one, **would not willingly do without it.**

The Motiograph Take-up is operated by a wide flexible **flat belt,** the tension of which is regulated by an adjustable idler pulley which insures a positive uniform tension as well as a positive and continuous movement of the reel without the danger of tearing the sprocket holes in the film. The adjustment of the idler is accomplished by a set screw which is held in place by a check nut, and if the adjustment is made with reasonable care, it may be depended upon absolutely. Round belts are naturally stiff, stubborn and unreliable.

The Take-up is attached to the main frame by three artistic thumb screws, which require but a moment to insert, and as the base of the arm and the bosses on the frame are accurately machined, it may be depended upon to fit accurately and firmly. It requires no adjustment after attaching.

PRICE

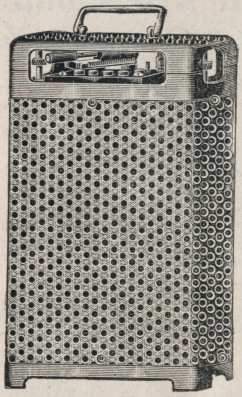
Motiograph Take-up for Model 1908 No. 1 Motiograph, with thumb Screws, belt adjustment, belt and 10 inch reel.....**$15.00**

The "A. C. R." Adjustable Rheostat

UNDERWRITER'S MODEL

The "A. C. R" Adjustable Rheostat, Underwriters' Model is another one of the "A. C. R" improvements, which has been designed to meet the growing demand for a rheostat of greater capacity and utility. The "A. C. R." Adjustable is made sufficiently heavy for all practical purposes, yet it is not a burden by being unnecessarily heavy.

The resistance consists of a number of individual coils of very high grade resistance wire, any one of which may be replaced without disturbing the others. The coils are insulated from the frame by porcelain insulators, to which they are attached in a novel manner. An important feature is that the number of insulators used is only one-half the customary number. This feature considerably reduces the weight and makes the coils much more convenient of access, yet the insulation is perfect and has an abundance of strength.



The adjustment lever is mounted on a slate base, which furnishes the highest class of insulation. It is located on the end of the rheostat, instead of on the side—a feature that has many advantages. It is less liable to injury in transportation, and entirely free from the liability of the lever being moved by accident.

The slate base adjustment lever is thoroughly protected from accidental breakage by a metal cap, yet the lever is made readily accessible by an adjustable telescopic extension handle that is tipped with fibre. After adjustment, the handle is telescoped to prevent accidental movement or tampering.

This rheostat is provided with a perforated steel jacket, which is sufficiently strong to furnish ample protection. The jacket may be instantly removed, by removing a few screws in the base and sides. The jacket is in two sections, and may be quickly removed or replaced. The "A. C. R." is arranged so it may be inverted and four legs used instead of the cap, an arrangement which is desirable under certain conditions.

Capacity: This Rheostat, when on currents of from 104 to 125 volts, will give from 25 to 30 amperes without excessive heating. The 220 volt Rheostats will furnish about 25 amperes.

The "A. C. R." Adjustable Underwriters' Rheostat is strictly high-class in every respect, and fills the requirements of both the motion picture exhibitor, (whether a traveler or permanently located), and the municipal authorities.

Dimensions: For 110 volts height to top of cover, 15 inches; length, 9⅞ inches; width, 4½ inches; weight, about 21 lbs.

For 22 volts the dimensions are the same except that it is about 5 inches higher.

PRICES

The "A. C. R" Underwriter's Adjustable Rheostat, 110 volts with cover or legs.... **$17.50**

Same without cover or legs... **16.00**

The "A. C. R" Underwriter's Adjustable Rheostat, 220 volts, with cover.... **25.00**

The "A. C. R." Underwriter's Non-Adjustable Rheostat, similar to the "Underwriter's Adjustable" except that it is non-adjustable and is not provided with the cover on the top.... **$10.00**

Set of Four Legs for either of the above rheostats.... **1.50**

"A. C. R." UNIVERSAL — Four Rheostats in One

The frame and jacket is similar to the 'A. C. R." Adjustable, but has four legs instead of the cover.

On 110 volt circuit, one lamp to carry about 12 amperes. On 110 volt circuit, one lamp to carry 25 amperes. On 110 volt circuit, one lamp to carry about 50 amperes. On 110 volt circuit two arc lamps to carry 25 amperes for each. On 220 volt circuit, one lamp to carry about 25 amperes.

PRICES FOR "A. C. R." UNIVERSAL RHEOSTAT.

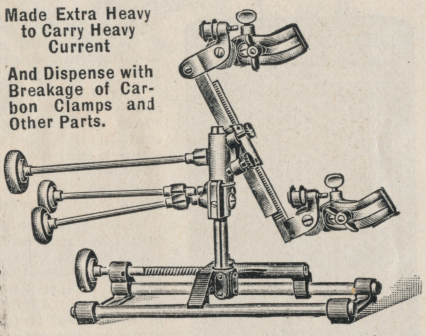
"A. C. R." Universal Rheostat, including four legs.....**$15.00**

The "Motio" Universal Arc Lamp

The "Motio" Universal Arc Lamp was designed for use with the Motiograph Motion Picture Machine and possesses many features of advantage not to be found heretofore in other lamps. Besides being unusually strong and heavy, and adapted in every particular for use on heavy currents, it is provided with improved extra heavy carbon clamps, which not only furnish ample contact surface to prevent short circuiting, but are sufficiently strong to avoid the breakage so common in other lamps. The carbons are held firmly between two strong jaws, and are clamped in place by a single thumb screw. The clamps will hold firmly the entire range of sizes of carbons that are in general use.

Made Extra Heavy to Carry Heavy Current

And Dispense with Breakage of Carbon Clamps and Other Parts.



All Hand Wheel Adjustments for focusing are a special feature not to be found in any other arc lamp, and one that is much appreciated by experienced operators. It has the vertical, sidewise and endwise adjustments operated by hand wheels, all located outside of the lamp house with which the point of illumination may be accurately, quickly and positively adjusted to the focus of the condensers. Each adjustment is entirely independent of the other, which enables the operator to correct any one without disturbing the others. The vertical and sidewise adjustments and the carbon feed have flexible ball shafts or arbors, which permits of their being located stationary at the point where they pass through the lamp house. This arrangement is a very great advantage, as it enables the operator to get more accurate and quicker adjustments than otherwise would be obtainable. Another feature is the insulated adjustable carbon clamp stops, which in case the joint should become loose, will prevent the clamp from dropping down and causing a short circuit. This feature is necessary to fill the fire inspector's requirements in some cities. The rack adjustment is unusually long and is sufficient to consume full 6 inch carbons with one setting. The lamp is very rigid, well finished and nickel plated.

PRICES.

"Motio" Universal Arc Lamp, with upright spindle, but without sliding base.....**$15.00**

Sliding Base, with backward and forward screw adjustment, adapted to use in any lamp house 6 inches or more in width. If desired, extra.....**$5.00**

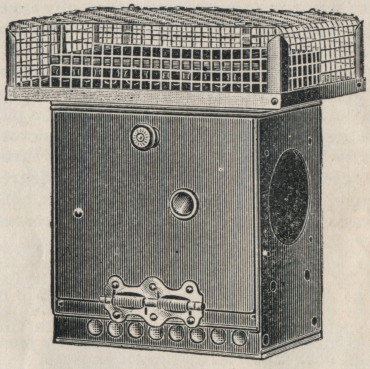
Extra Carbon Clamps, Main, upper or lower, each..... **1.40**

Extra Carbon Clamps, Auxilary, upper or lower, each..... **.60**

The Underwriters' Fireproof Lamphouse

For The Motiograph No. 1, Model 1908

. . . MOTION PICTURE MACHINE . . .



This Lamp House has been designed especially with a view to complying with the fire insurance and city ordinance requirements of a few cities that have more or less strict regulations with relation to the use of Motion Picture Machines, and it may be depended upon to meet all requirements of which we have a knowledge at the time of issuing this catalog—in fact, it will be furnished with a certificate of inspection from the city electrician of Chicago, when required, and the regulations in Chicago are probably the most severe of any city in the country, owing to the great theatre disaster of a few years ago.

The Lamp House is made of Russia iron without the use of solder, all joints being seamed or riveted. It is well supplied with ventilation, all openings for which are covered with wire gauze of fine mesh.

The door is provided with strong spring hinges, which hold it in a closed position. The electric wires enter the lamphouse through porcelain bushings.

A heavy wire basket is provided for the top of the Lamp House to prevent contact with anything that might become ignited.

The rear of the Lamp House is provided with two slides that close tightly on the stems of the arc lamp, and are held in position when closed by a screw clamp.

An auxilliary bottom of transite Asbestos board is provided, to comply with the further requiremeuts of the Underwriters' and Municipal authorities.

PRICES.

Underwriters' Lamp House, complete as illustrated and described above..... $15.00

Underwriters' Lamp House, complete with double sliding base, cone front with dowser shutter, pair of condensing lenses in mount, spring hinged side door, Underwriters' Wire Lamp House hood, saddle support for burner, and Motio hand feed arc lamp with all hand wheel adjustments on heavy oak base board and slide carrier..... 36.00

Underwriters' Side Door with spring hinge on panel, for use on Motiograph Lamp House..... 3.50

Auxilliary Bottom of Transite Asbestos Board, for Motiograph Lamp House..... 1.80

Underwriters' Galvanized Wire Hood, of heavy wire, with supports for same, and screws for attaching..... 3.50

Mica Panels, for insulation lining of top and bottom of Lamp House (required by some municipalities) each..... .90

Switch Casing, Russia Iron..... 1.80

Fire Shields for Motiograph film gate, upper and lower, each... 1.50

Certificate of Inspection from City Electrician of Chicago.... 1.00

MOTION PICTURE OBJECTIVE LENSES.

The Motion Picture Objective serves the same purpose for the motion picture machine as the stereopticon lens does for the stereopticon, and is constructed after the same general plan, but owing to the fact that the enlargement for motion pictures must be many times greater than for stereopticon pictures, the requirements are proportionately more exacting. The picture of a motion picture film measuresa little less than ¾ of an inch by 1 inch, while the picture portion of a lantern slide view is a little less than 2¾ by 3 inches. From this it will be seen that the magnifying power of the motion picture lens must be three times greater to produce the same size picture on the screen, and it naturally follows that in order to secure satisfactory results the lens must be made with the greatest possible degree of accuracy, in order to secure sharp detail, and depth of focus, both of which are absolutely necessary to the production of good pictures.

In our "Roco Special" Motion Picture Lens we have endeavored to leave nothing undone that would contribute to the best results. The lens has been designed by an expert in this line; one who has devoted himself to this line of work ever since the introduction of motion pictures. Every stage of the manufacture is conducted by the most thorough mechanics who have had long experience in this line of work, and from the lens glasses to the mountings every piece and part represents the best in both material and workmanship.

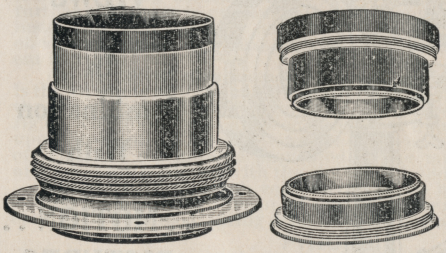
In the planning of this new line of Motion Picture lenses, our action has been the same as on our new line of stereopticon lenses; viz , a radical departure from the old system of measurements, and the adoption of a new system that is suited to the requirements and in keeping with the rapid progress in this line of work. Instead of giving them numbers, or names which means nothing, we have designated each lens by its equivalent focus in inches, which means the distance between the motion picture film and a point between the two sets of lens glasses at which the light rays cross, this point being usually a little in front of the dividing line between the two lens cells. The following table gives the approximate size of picture projected by the different lenses at varying distances from the screen. The upper figures represent the heighth of the picture on the screen, while the lower figures represent the width. The figures in the left hand column represent the focal length of the Motion Picture lenses, while the figures in the right hand column represent the focal length of the stereopticon lens best adapted to match the motion picture lenses in the respective horizontal columns:

E. F.	20 feet	30 feet	40 feet	50 feet	60 feet	70 feet	80 feet	90 feet	100 feet	110 feet	120 feet	E. F.
					SIZE OF PICTURE							
3	4⅛ 6¼	8 11	8¾ 12½	11½ 15½	13¾ 18¾	15¾ 21	17½ 25	20¼ 27	22¾ 31¾	**26** 34½	28½ 37½	**10**
3½	4 5½	5¾ 8	7¾ 10¾	9¾ 13½	11½ 16	13¾ 18¾	15¾ 21½	16½ 24¼	19½ 26¾	22½ 30¼	23¼ 32	**12**
4⅓	....	5 6½	6½ 8¾	9¼ 11	10 13¼	11½ 15½	13 17½	14¾ 19½	16 21½	17¾ 23½	19½ 26	**15**
5¼	....	....	5½ 7	6¾ 9	8 10¾	9¼ 12½	11¼ 14¾	12¼ 16¼	13½ 18	14¾ 19¾	16¼ 21½	**18**
6	....	....	....	5¾ 7¾	7 9¼	8 10¾	9¼ 12¼	10¼ 13¾	11½ 15½	12¾ 17	13¾ 18½	**21**

Our Way of matching Motion Pictures with Stereopticon views is shown in the diagram herewith. The solid line represenss the margin of the Motion Picture view. while the dotted line represents the margin of the Stereopticon view. These proportions result in a harmonious and pleasing effect that is entirely absent in any other arrangement. Some dealers and exhibitors match to the sides and disregard the top and bottom. Our table of comparative sizes have been calculated on the proportions shown in the diagram and unless otherwise instructed we will fill orders accordingly.

The focus of both Stereopticon and motion picture lenses vary sometimes over 10 per cent, hence the size of picture will vary accordingly. For more accurate matching, we make an extra charge of $3.00.

A Special Feature of the "Roco Special" motion picture lens, and one of very great convenience and economy, is the interchangeable lens cells, by the use of which it is unnecessary to have anything more than one mount. By purchasing additional pairs of lens cells for the various foci, they may be interchanged in the lens mount to produce the sized picture desired. When using lenses of longer focus it is necessary to extend the lens mount further from the body of the machine, and for this purpose we provide what we call extension collars, each of which is designated by the length of focus of the lens.



For the new "Roco Special" Motion Picture lens we have designed an entirely new mount in which a knurled ring that encircles the mount, working in spiral grooves, is used for focusing instead of the old-fashioned rack and pinion, which is not only cumbersome and awkward, but constantly exposed to accidents in transportation. The spiral focusing device is in keeping with the progress demanded in this line. It is artistic in design, and provided with the finest adjustment for focusing. The lens barrel and focusing ring are nickle-plated; the lens cells are enameled in black; the lens body is finished in Egyptian bronze lacquer. The combination makes a very pretty and harmonious contrast.

PRICES.

The "Roco Special" Motion Picture lens, 3 inch focus, each.....**$8.00**

The "Roco Special" Motion Picture lens, 3½ or 4⅓ inch focus including extension collar (except for the 3-inch), each.....**$8.50**

The "Roco Special" Motion Picture lens, 5¼ and 6 inch focus, with extension collar **$9.00**

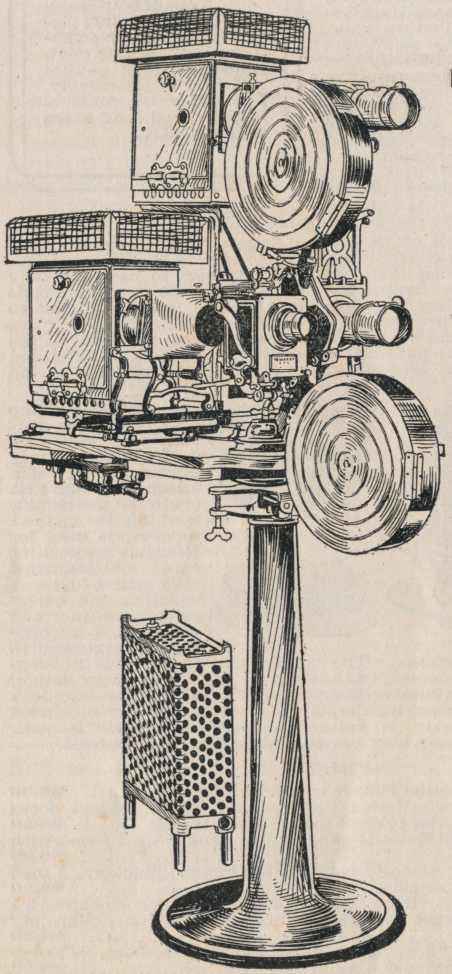
Lens Cells for the "Roco Special" Motion Picture Machine, 3 inch focus, front and rear, per pair.....**$5.50**

Lens Cells for the "Roco Special" Motion Picture Machine, 3½ or 4⅓ inch focus, front and rear including extension collar, per pair **$6.00**

Lens Cells for the "Roco Special" Motion Picture lens, 5¼ and 6-inch focus, including extension collar, per pair **$6.50**

The 3-inch lens requires no extension collar; all of the others do.

The Stereo-Motiograph



Is Another Motiograph Improvement

SHOWS DISSOLVING STERE-OPTICON VIEWS

In Combination With

..MOTION..
..PICTURES..

as they should be shown.

What it accomplishes is truly wonderful

SEE DESCRIPTION ON FOLLOWING PAGE.

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IF YOU WANT THE REPUTATION

. . . OF GIVING . . .

The Best Show in Town

Don't Slide Your Views, But Show Them With the Dissolving Combination

STEREO - MOTIOGRAPH

IT SHOWS

Stereopticon Views and Motion Pictures as they should be shown. The Stereopticon views are projected with that mysterious and beautiful effect by which one view is made to gradually fade away and the next succeeding one grows out of the haze of the one last shown. The Stereo-Motiograph is not to be compared with the cheap make-shift arrangements usually sold for dissolving work, but is characterized throughout by the same type of design and workmanship that has placed the Motiograph so far ahead of other Motion Picture Machines. One of the special features of the Stereo-Motiograph is the new type of shutter, a novel arrangement which places the shutters immediately behind the lenses, where they have a rigid support and steady guide instead of being attached to the front, as is the usual custom, and a further advantage is grained in that the light is cut off from all sides, instead of from one side only, and by so doing a perfect dissolving effect is obtained. The dissolving handle is placed in the most convenient location.

Another great advantage to be found only in the Stereo-Motiograph is the all screw adjustments for centering the views on the screen, and the system of locking the adjustments to make the whole apparatus rigid. The lower front slides on a rigid track and is well braced. The upper Stereopticon has a bellows of extra length and the side radiation of light from the lower is prevented by the metal hood. Both upper and lower are equipped with the Motiograph slide carrier swing.

The Stereo-Motiograph equipment may be had either with or with out the Underwriters' Fire-proof equipment for the lamp houses, which consists of wire hood, spring door, transite bottom, etc.

PRICES.

STEREO-MOTIOGRAPH CONSISTING OF

Motiograph Motion Picture Equipment "A" complete as described on another page, except that it includes Universal Undrwriters' Rheostat, instead of "A. C. R" Adjustable.. **$212.00**

Top Motiograph Lantern with regular Motiograph Lamp House, one-half size lens, and extra length bellows.....
Motiograph Arc Lamp with hand wheel adjustments,
Braced Tubular Rear Support, screw adjustable front top support, and sliding adjustable lower lantern front lens support..... **67.00**
Motiograph Double Shutter Electric Dissolver,.....

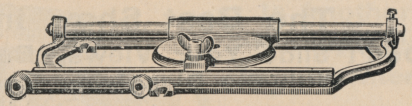
One Extra Switch and fuse block for top Lantern..... **2.00**

Wire for connecting top lantern..... **3 00**

$284.00

Underwriter's Equipment for both Motiograph and Top Lantern, consisting of Underwriters' Galvanized Wire Hood for Lamp House Top, paneled side door with spring hinge, auxilliary bottom of transite asbestos board, and mica lining for top and bottom of lamp houses, each $8.00..... **$16.00**

The Motiograph Vise Grip Sliding Base



This attachment has been designed with a view to furnishing a substantial means for connecting the Motiograph mechanism with a single or double stereopticon.

It is arranged so that the Motiograph mechanism may be slid to the left in front of the lantern when motion pictures are to be shown, and slid to the right, carrying the stereopticon lens in front of the lantern, when stereopticon views are to be shown.

The frame should be screwed firmly to the baseboard on which both the motion picture mechanism and lantern should be mounted. The slide is so arranged that when the Motiograph is in position for showing motion pictures, that it may be locked in place with a vise-like grip, which prevents vibration and dancing of the picture.

When using the Motiograph Sliding Base with the Enterprise Lantern, extension legs and truss should be ordered, for the purpose of raising the lantern so the center of the condensing and objective lens will coincide with the center of the light aperture of the motion picture machine, the height of which is 9 inches from the baseboard.

When using a lantern other than the Enterprise, it may be elevated by the use of a wood frame.

The Sliding Base is finished in hard black japan and the thumb nut nickel plated.

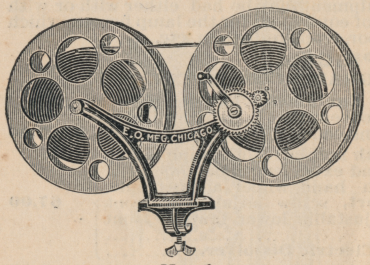
DIMENSIONS.

Length, 13 inches; width, 7¾ inches; swing of slide, 8 inches. Net weight, 4½ lbs.

PRICES.

Motiograph Vise Grip Sliding Base, with screws..... .....**$ 6.00**
Truss and Four Extension Legs, for raising the Enterprise Lantern to fit the Motiograph Mechanism..... **1.80**

THE "TOGO" FILM WINDER.



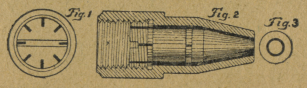
No. 1

The "Togo" Film Winder is a most convenient accessory for rewinding and the repairing of films, and should be included as a part of the outfit of every Motion Picture exhibitior. The "Togo" Film Winder is made in two styles, viz: No. 1, which has a single frame, and No. 2, which is divided into two frames and is better adapted to repairing than the No. 1. Both styles are artistic in design, strong, and are unusually well made. They are provided with a thumb screw clamp, with which to attach them quickly to a table, bench or shelf, besides which they each have two slots for bolts or wood screws. The frames are finished in black japan and the gears and fitting are nickel plated. They take any standard reel up to ten inch.

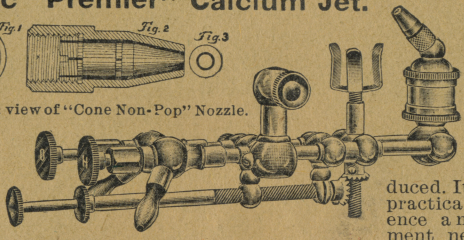
PRICES

"Togo" Film Rewind, Style No. 1..... ...**$3.00**
"Togo" Film Rewind, Two Separate Frames, Style No. 2.....**$5.00**

"Roc Premier" Calcium Jet.



Sectional view of "Cone Non-Pop" Nozzle.



No. D

The "Roc Premier" represents the highest degree of development and the most perfect calcium jet ever produced. It has every practical convenience and adjustment necessary to the greatest possible efficiency. The most prominent feature in this new jet is the "Cone Non-Pop" nozzle which absolutely prevents popping, and at the same time affords better combustion, hence greater illumination. Both of these advantages are hailed with delight by experienced exhibitors. Different sizes of cones makes it possible to regulate the quantity of gas to suit individual requirements. The consumption of gas per hour with Cone No. 1 is about three feet, No. 2 about four feet, and No. 3 about six feet. Larger sizes made to order.

Unless otherwise ordered we will furnish the No. 2 cone.

A feature of great value in this jet is the **Perfection Mixing Chamber**, an arrangement which insures the perfect mixing of the two gases, hence, perfect combustion, and the greatest possible intensity of illumination. **A screw adjustment** for adjusting the distance between the lime and the point of the jet is another special feature of the "Roco Premier" and is alone the means of placing this jet a long way ahead of anything else on the market. The screw adjustment, which is mounted on the lime turner shaft, insures a steady and positive movement of the lime, and it is sure to remain where it is placed. By the use of this handy device, it is possible to secure a perfect and positive adjustment of the lime without the necessity of exposing the hand to the heat of the inside of the lamphouse.

Needle Valves is another excellent feature to be found in no jet other than the "Roc Premier" No. D. By their use a finer adjustment of the gases may be secured with the greatest ease and certainty, and after the adjustments are secured there is no danger of their being changed by an accidental knock, as with stop cocks.

Long Tubular Bearings to the cross head and other mountings, are a great improvement, which insures the smooth and easy working of all parts without chafing or cramping.

Take it all in all, this jet possesses so many points of merit, that those who are interested in securing the best results with the greatest comfort in operating, cannot afford to consider any other.

PRICES.

"Roc Premier" Calcium Jet No. A, with lime turner, Perfection Gas Mixer, screw lime adjustment, plain single hole tip, each. **$9.50**

"Roc Premier" Calcium Jet No. B. lime turner, Perfection Gas Mixer, screw lime adjustment. Patent Cone "Non Pop" Nozzle **10.50**

"Roc Premier" Calcium Jet No. C, with lime turner, Perfection Gas Mixer, screw lime adjustment, patent Cone "Non Pop" Nozzle and stop cocks..... **$11.50**

"Roc Premier" Calcium Jet No. D, with lime turner, Perfection Gas Mixer, screw lime adjustment, patent Cone "Non Pop" Nozzle and needle valves..... **$12.00**

Extra Nozzles, plain single hole, No. 1, 2 or 3, each..... **1.25**

Extra "Cones," for patent "Non Pop" Cone Nozzle, each..... **1.50**

The No. C. is recommended for use with the Motiograph.